

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of all claims in the application.

Listing of Claims

Claims 1-47 (Canceled)

48. (New) A method of screening a test composition for G protein-coupled receptor (GPCR) agonist activity against multiple GPCRs, comprising:
- (a) providing a mixture of cells comprising a first cell and a second cell, said first cell comprising a first GPCR and a first conjugate, said second cell comprising a second GPCR and a second conjugate;
 - (b) exposing said mixture of cells to a test composition;
 - (c) detecting said first and second conjugates for an indication of GPCR agonist activity.
49. (New) The method of Claim 48, wherein at least one conjugate comprises a marker molecule and a protein.
50. (New) The method of Claim 49, wherein the marker molecule comprises a radioisotope, enzyme, fluorescent group, chemiluminescent group or any combination thereof.
51. (New) The method of Claim 49, wherein the marker molecule comprises an epitope tag, affinity label or combination thereof.
52. (New) The method of Claim 49, wherein said marker molecule is a fluorescent protein.
53. (New) The method of Claim 52, wherein said fluorescent protein is green fluorescent protein (GFP).
54. (New) The method of Claim 49, wherein said protein is an arrestin.
55. (New) The method of Claim 48, wherein said first and second conjugates are the same.
56. (New) The method of Claim 48, wherein said first and second GPCRs interact with different G_α protein subunits.
57. (New) The method of Claim 48, wherein said indication of GPCR agonist activity is translocation or localization of at least one conjugate.

58. (New) The method of Claim 48, wherein said indication of GPCR agonist activity is translocation or localization of at least one conjugate to a vesicle, endosome, granule or pit.
59. (New) The method of Claim 48, wherein said indication of GPCR agonist activity is an increase in translocation or localization of at least one conjugate, after exposure said mixture of cells to said test composition.
60. (New) The method of Claim 48, wherein said indication of GPCR agonist activity is an increased level of translocation or localization of at least one conjugate, with respect to a predetermined level of translocation or localization of at least one conjugate.
61. (New) A method of screening a test composition for G protein-coupled receptor (GPCR) agonist activity against multiple GPCRs, comprising:
- (a) providing a cell comprising a first GPCR, a first conjugate associated with the desensitization pathway of said first GPCR, a second GPCR different from said first GPCR, and a second conjugate associated with the desensitization pathway of said second GPCR;
 - (b) exposing said cell to a test composition;
 - (c) detecting said first and second conjugates for an indication of GPCR agonist activity.
62. (New) The method of Claim 61, wherein at least one conjugate comprises a marker molecule and a protein.
63. (New) The method of Claim 62, wherein the marker molecule comprises a radioisotope, enzyme, fluorescent group, chemiluminescent group or any combination thereof.
64. (New) The method of Claim 62, wherein the marker molecule comprises an epitope tag, affinity label, or combination thereof.
65. (New) The method of Claim 62, wherein said marker molecule is a fluorescent protein.
66. (New) The method of Claim 65, wherein said fluorescent protein is green fluorescent protein (GFP).
67. (New) The method of Claim 62, wherein said protein is an arrestin.
68. (New) The method of Claim 61, wherein said first and second conjugates are the same.
69. (New) The method of Claim 61, wherein said first and second GPCRs interact with different G_{α} protein subunits.

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70. (New) The method of Claim 61, wherein said indication of GPCR agonist activity is translocation or localization of at least one conjugate.
71. (New) The method of Claim 61, wherein said indication of GPCR agonist activity is translocation or localization of at least one conjugate to a vesicle, endosome, granule or pit.
72. (New) The method of Claim 61, wherein said indication of GPCR agonist activity is an increase in translocation or localization of at least one conjugate, after exposure of said cell to said test composition.
73. (New) The method of Claim 61, wherein said indication of GPCR agonist activity is an increased level of translocation or localization of at least one conjugate, with respect to a predetermined level of translocation or localization of at least one conjugate.